

IN THE CLAIMS

1. (currently amended) A method for controlling temperature in a hard disk drive during testing, the hard disk drive having at least two modes of operation, the method comprising:

setting a desired temperature range for a hard disk drive that is being tested, wherein the hard disk drive is tested by monitoring at least one Performance Measurement Unit (PMU), and wherein each PMU is a quantified measurement unit that describes any deviation from an optimal performance of the hard disk drive;

upon determining that a temperature inside the hard disk drive is below the desired temperature range, changing a mode of operation of the hard disk drive from a first mode of operation to a second mode of operation, wherein the first mode of operation generates less heat than the second mode of operation, wherein an amount of time required to reach the desired temperature range is minimized by keeping the hard disk drive in the second mode of operation until the desired temperature range inside the hard disk drive is reached, wherein the minimized amount of time required to reach the desired temperature range results in a reduced number of PMUs being performed while the hard disk drive reaches the desired temperature range; [[and]]

upon determining that the temperature, inside the hard disk drive is above the desired temperature range, changing the mode of operation of the hard disk drive from the second mode of operation to the first mode of operation, wherein the desired temperature range inside the hard disk drive is maintained after being reached through use of the second mode of operation; and

suspending a test program for the hard disk drive as long as the temperature inside the hard disk drive is below or above the desired temperature range.

2. (original) The method of claim 1, wherein the first and second modes of operation are seek modes, and wherein the first seek mode that is slower than the second seek mode.

3. (original) The method of claim 1, wherein the first mode of operation is an IDLE seek mode and the second mode of operation is a rapid seek mode.

4. (original) A method of claim 1, wherein the first mode of operation has a slower disk rotation speed  
than the second mode of operation.

5. (original) The method of claim 1, wherein the first mode of operation has a slower clock speed than second mode of operation for a processor within the hard disk drive.

6. (currently amended) A method for maintaining a steady-state internal temperature inside a housing for a hard disk drive during testing operations of the hard disk drive, the hard disk drive having at least two modes of operation, the method comprising:

setting a desired temperature range for a hard disk drive that is being tested, wherein the hard disk drive is tested by monitoring at least one Performance Measurement Unit (PMU), and wherein each PMU is a quantified measurement unit that describes any deviation from an optimal performance of the hard disk drive;

upon determining that a temperature inside the hard disk drive is below the desired temperature range, changing a mode of operation of the hard disk drive from a first mode of operation to a second mode of operation, wherein the first mode of operation generates less heat than the second mode of operation; [[and]]

upon determining that the temperature inside the hard disk drive is above the desired temperature range, changing the mode of operation of the hard disk drive from the second mode of operation to the first mode of operation and

suspending a test program for the hard disk drive as long as the temperature inside the hard disk drive is below or above the desired temperature range.

7. (original) The method of claim 6, wherein the first and second modes of operation are seek modes, and wherein the first seek mode is slower than the second seek mode.

8. (original) The method of claim 6, wherein the first mode of operation is an IDLE seek mode and the second mode of operation is a rapid seek mode.

9. (original) A method of claim 6, wherein the first mode of operation has a slower disk rotation speed than the second mode of operation.

10. (original) The method of claim 6, wherein the first mode of operation has a slower clock speed than a second mode of operation for a processor within the hard disk drive.

11. (original) A method for rapidly warming up a hard disk drive before testing the hard disk drive having a first and second mode of operation, the method comprising:

setting a desired temperature range for a hard disk drive that is to be tested; and  
upon determining that a temperature inside the hard disk drive is below the desired temperature range, setting a mode of operation of the hard disk drive to a first mode of operation, wherein the first mode of operation generates more heat than a second mode of operation, until the desired temperature range is reached.

12. (original) The method of claim 11, wherein the first and second modes of operation are seek modes, and wherein the first seek mode is faster than the second seek mode.

13. (original) The method of claim 11, wherein the first mode of operation is a rapid seek mode and the second mode of operation is an IDLE seek mode.

14. (original) A method of claim 11, wherein the first mode of operation has a slower disk rotation speed than the second mode of operation.

15. (original) The method of claim 11, wherein the first mode of operation has a slower clock speed than a second mode of operation for a processor within the hard disk drive.

16. (currently amended) A computer program product, residing on a computer usable medium, for controlling temperature in a hard disk drive during testing, the computer program product comprising:

program code for setting a desired temperature range for a hard disk drive that is being tested, wherein the hard disk drive is tested by monitoring at least one Performance Measurement Unit (PMU), and wherein each PMU is a quantified measurement unit that describes any deviation from an optimal performance of the hard disk drive;

program code for, upon determining that a temperature inside the hard disk drive is below the desired temperature range, changing a mode of operation of the hard disk drive from a first mode of operation to a second mode of operation, wherein the first mode of operation generates less heat than the second mode of operation, wherein an amount of time required to reach the desired temperature range is minimized by keeping the hard disk drive in the second mode of operation until the desired temperature range inside the hard disk drive is reached, wherein the minimized amount of time required to reach the desired temperature range results in a reduced number of PMUs being performed while the hard disk drive reaches the desired temperature range; [[and]]

program code for, upon determining that the temperature, inside the hard disk drive is above the desired temperature range, changing the mode of operation of the hard disk drive from the second mode of operation to the first mode of operation, wherein the desired temperature range inside the hard disk drive is maintained after being reached through use of the second mode of operation; and

program code for suspending a test program for the hard disk drive as long as the temperature inside the hard disk drive is below or above the desired temperature range.

17. (currently amended) The computer program product of claim [[15]] 16, wherein the first and second modes of operation are seek modes, and wherein the first seek mode that is slower than the second seek mode.

18. (currently amended) The computer program product of claim [[15]] 16, wherein the first mode of operation is an IDLE seek mode and the second mode of operation is a rapid seek mode.

19. (currently amended) A computer program product of claim [[15]] 16, wherein the first mode of operation has a slower disk rotation speed than the second mode of operation.

20. (currently amended) The computer program product of claim [[15]] 16, wherein the first mode of operation has a slower clock speed than a second mode of operation for a processor within the hard disk drive.